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IS 759 (1988): Blanks for Swells of Jute Looms [TXD 14: Machinery for Fabric Manufacture]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS : 759 - 1988
(Reaffirmed 1993)

Indian Standard

**SPECIFICATION FOR
BLANKS FOR SWELLS OF JUTE LOOMS**

(First Revision)

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR BLANKS FOR SWELLS OF JUTE LOOMS

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards on 9 March 1988, after the draft finalized by the Jute Mill Machinery/Accessories and Spare Parts Sectional Committee had been approved by the Textile Division Council.

0.2 This standard was originally published in 1956. In this revision, following major changes have been carried out based on the experience gained since its publication in 1956:

- a) Blanks for swells made out of laminated compressed veneer board have been included;
- b) Dimensions have been left to agreement between the buyer and the seller and only tolerances for length, width and thickness have been included; and
- c) The requirement for freedom from defects has been modified.

0.3 A swell, one of the various parts of a loom, is fixed in each of the two shuttle boxes fitted on each side of the loom. The swell performs three functions:

- a) It acts as a brake on the shuttle at the end of its traverse across the loom,
- b) It prevents the shuttle from rebounding out of the shuttle box where the shuttle halts momentarily at the end of its traverse across the loom, and
- c) It holds the shuttle at its proper place near the picker to receive the stroke of the picker for its next traverse in the reverse direction.

0.4 Useful information for the manufacture of blanks for swells, list of approved species of timbers, short description of approved species of timber and characteristics of approved species of timber as compared to Beech are given in the following Appendices:

- Appendix A Code of practice for manufacture of blanks for swells made out of solid wood
- Appendix B List of approved species of timber for blanks for swells made out of solid wood
- Appendix C List of approved species of timber for veneer for laminated compressed blanks for swells
- Appendix D Short description of species of timber for the manufacture of blanks for swells out of solid wood
- Appendix E Characteristics of approved species of timber as compared to Beech

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the requirements of blanks for swells of jute looms. A method of grading blanks (made out of solid wood) on the basis of frequency of knots of permissible size is also indicated.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions of various types of timber defects as given

in IS : 707-1976* shall be made applicable.

3. MATERIAL

3.1 Blanks shall either be sawn out of timber of any of the approved species (see Appendix B) specified in an agreement between the buyer and the seller or from laminated compressed veneer board having veneer thickness between 0.9 and

*Glossary of terms applicable to timber technology and utilization (second revision).

2.0 mm and specific gravity of veneer board between 1.05 to 1.25. The species of timber used for veneer shall be any one of the timbers prescribed in Appendix C.

4. REQUIREMENTS

4.1 Freedom from Defects

4.1.1 Blanks made from solid wood shall be free from checks, splits, honeycombing, warp, twist, gum veins, bark pockets, borer holes, etc, which are likely to affect the life and usefulness of the blanks. Sapwood, if any, in individual blank shall not exceed 10 percent of its total volume provided the entire piece is brush coated with suitable preservative.

4.1.2 Blanks made from laminated compressed veneer boards shall be free from checks, splits, blisters, discolouration, gaps, delaminations, overlaps, etc, which are likely to affect the life and usefulness of the blanks.

4.2 Knot Size and Frequency

4.2.1 Each blank made out of solid wood shall be graded in Grade 1 and Grade 2 in accordance with the requirements of Table 1 in respect of frequency and size of knots.

TABLE 1 GRADING OF BLANKS

GRADE NO.	REQUIREMENT
1	Free from knots
2	Not exceeding 1 pin knot up to 3 mm in size

4.2.2 For determining the size of knots, the largest lateral distance between any two opposite points on its periphery shall be taken into account; the distorted grain immediately surrounding knots shall not be included in the measurement.

NOTE — Gradation is not applicable for blanks made out of laminated compressed veneer boards.

4.3 Dimensions

4.3.1 The length, width and thickness of blanks

shall be as agreed to between the buyer and the seller. However, the following tolerances shall be made applicable:

- a) Length : ± 3 mm,
- b) Width : ± 1.5 mm, and
- c) Thickness : ± 1 mm.

5. MARKING

5.1 Each blank shall be marked with the following:

- a) Name of the article;
- b) Manufacturer's name, initials or trade-mark, if any;
- c) Dimensions; and
- d) Year of manufacture.

5.1.1 The blank may also be marked with the Standard Mark.

NOTE — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6. SAMPLING

6.1 Unless otherwise agreed to between the buyer and the seller to ascertain the conformity of 'blanks for swells of jute looms' to the requirements of this specification, single sampling plan with Inspection Level I and Acceptance Quality Level (AQL) of 2.5 percent given in Table 1 and 2 of IS : 2500 (Part 1)-1973* shall be followed.

*Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (first revision).

APPENDIX A

(Clause 0.4)

RECOMMENDED CODE OF PRACTICE FOR MANUFACTURE OF BLANKS FOR SWELLS MADE OUT OF SOLID WOOD

A-1. Timber shall be converted into blanks of suitable size. The blanks shall then either be air-seasoned by keeping them at least for a period of one month under cover or shall be kiln-seasoned under proper conditions of drying to the required moisture content. Alternatively, timber may be seasoned in the form of planks before conversion

into blanks.

A-1.1 The moisture content of well-seasoned blanks or planks should be within 8 to 12 percent depending upon the locality of manufacture and use.

APPENDIX B(*Clauses 0.4 and 3.1*)**LIST OF APPROVED SPECIES OF TIMBER FOR BLANKS FOR SWELLS MADE OUT OF SOLID WOOD**

<i>Trade Name</i>	<i>Botanical Name</i>
Beech	<i>Fagus</i> sp.
Bijasal	<i>Pterocarpus marsupium</i> Roxb.
Irul	<i>Xylia xylocarpa</i> Taub.
Padauk	<i>Pterocarpus dalbergioides</i> Roxb.
Pyinkado	<i>Xylia dolabri-formis</i>
Sissoo	<i>Delbergia sissoo</i> Roxb.

APPENDIX C(*Clauses 0.4 and 3.1*)**LIST OF APPROVED SPECIES OF TIMBER FOR VENEER FOR LAMINATED COMPRESSED BLANKS FOR SWELLS**

<i>Trade Name</i>	<i>Botanical Name</i>
Mango	<i>Mangifera Indica</i>
Kadam	<i>Anthocephalus Chinensis</i>
Birch	<i>Betula</i> Spp.
Gurjan	<i>Dipterocarpus</i> Spp. (other than <i>D. Macrocarpus</i>)
Makrisal (Chiluni)	<i>Schima Wallichii</i> Choisy
Makai	<i>Chorea Assamica</i>
Chikrassi	<i>Chukrasia Velutina</i>

APPENDIX D(*Clause 0.4*)**SHORT DESCRIPTION OF SPECIES OF TIMBER FOR THE MANUFACTURE OF BLANKS FOR SWELLS OUT OF SOLID WOOD**

Beech — With straight-grain, close and even texture, needs careful seasoning.

Bijasal — With somewhat interlocked grain, fairly strong, above average in durability, easy to work and to season.

Irul — With interlocked grain, hard, heavy, durable, hard to work and difficult to season.

Padauk — With broad interlocked grain, rather coarse in texture, very strong, durable, easy to work and to season.

Pyinkado — With interlocked grain, very hard, durable, hard to work and difficult to season.

Sissoo — Slightly heavier and a good deal harder than teak, very durable, fairly easy to work and to season.

APPENDIX E

(Clause 0.4)

CHARACTERISTICS OF APPROVED SPECIES OF TIMBER AS COMPARED TO BEECH

<i>Species of Timber</i>	<i>Mass in Terms of Beech</i>	<i>Strength as a Beam</i>	<i>Stiffness as a Beam</i>	<i>Suitability as a Post or Strut</i>	<i>Shock Resisting Ability</i>	<i>Retention of Shape</i>	<i>Shear</i>	<i>Hardness</i>
Beech	100	100	100	100	100	100	100	100
Bijasal	112	130	109	123	103	151	91	146
Irul	117	128	119	139	68	126	119	212
Padauk	101	126	120	137	76	205	91	143
Pyinkado	128	159	152	178	117	139	122	192
Sissoo	109	110	95	106	106	164	106	144

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